

The Impact of Teaching Critical Thinking on EFL Learners' Speaking Skill: A Case Study of an Iranian Context

Alireza Mousavi Arfae¹

¹Faculty of Education, University of Western Ontario, Canada

Correspondence: Alireza Mousavi Arfae, Alireza Mousavi Arfae, Faculty of Education, University of Western Ontario, Canada

Received: October 31, 2019

Accepted: December 13, 2019

Online Published: December 20, 2019

doi: 10.5539/elt.v13n1p112

URL: <https://doi.org/10.5539/elt.v13n1p112>

Abstract

English speaking proficiency requires more than knowing its grammatical and semantic rules. It also includes the knowledge of how native speakers of one language use the language in the context of structures of interpersonal exchange, within which many factors interact. Critical thinking is the deliberate determination of whether we should accept, reject, or suspend judgment about a claim and of a degree of confidence with which the language speakers accept or reject it. The present quasi-experimental study aimed to investigate the impact of teaching critical thinking on the speaking skill of EFL learners. To this end, 44 male and female intermediate students at Respina Talk (i.e., Iran-Canada) language school with the age range of 20-35 were selected in order to achieve the objectives of the study. According to the obtained results, there was a significant relationship between the promotion of critical thinking and EFL learners' speaking skill. The findings of this study may have some theoretical and practical implications for material developers, EFL teachers, language learners, etc.

Keywords: critical thinking, speaking skill, EFL learners, Iranian context

1. Introduction

1.1 Statement of the Problem

For years, pedagogical circles in ELT have been striving to better the existing methods as well as forging new ones that house a variety of recipes aimed at facilitating the teaching-learning process of language skills. Because of its importance, the speaking skill of the learners has received considerable attention of the scholars in the field. Baily and Savage (1994) suggest that speaking in a second and foreign language has often been viewed as the most demanding of four skills. ELT theoreticians have accordingly been trying to conjure up the means necessary to help EFL or ESL learners, learn how to speak a foreign or second language.

Other scholars have also cited the importance of speaking in the ESL or EFL learning and teaching. For instance, Lazaraton (1996, p.151) says, "For most people the ability to speak a language is synonymous with knowing that language, since speech is the most basic means of human communication." Although such strong statements have drawn extents of controversy arguing their validity, they have mostly been concurred upon their assertion of the significance of the oral proficiency of the language learners. Nunan (1999) rather poetically describes listening as the "Cinderella skill" in second or foreign language learning and yet speaking as the "elder sister".

Speaking proficiency requires more than knowing its grammatical and semantic rules. It also includes the knowledge of how native speakers of one language use the language in the context of structures of interpersonal exchange, in which many factors interact (Richards, Gallo, & Renandya, 2001). Speaking skill in this study was operationally defined as the scores the participants gained on a PET speaking test.

A wide range of strategies have been concocted and examined to the purpose of helping EFL or ESL learners with their speaking skill. Not all of them, however, have proven successful. The relentless efforts of the scholars in the field, nevertheless, continue to churn new ideas to be added to the array of the existing ones.

One of the relatively recent offspring of such endeavors happens to be Critical Thinking. An acute, persistent problem in ELT programs, regarding producing language either in written or spoken form in particular, is the occasional incompetence of learners in generating ideas. Thoughts can be regarded as ingredients necessary for producing language. A feature of language is creativity; hence, the learners need to be taught how to think creatively and critically in the language under instruction. Scholars believe critical thinking can serve as an

engine in so doing. It can be described as a catalyst in the process of thinking empowering the learners of the language to think creatively. Sternberg (as cited in Lefrancois, 1991, p. 125) says, "Like any other ability that is acquired by individual, thinking can also be learned, and it can change over time".

Critical thinking is the deliberate determination of whether we should accept, reject, or suspend judgment about a claim and of a degree of confidence with which we accept or reject it (Moore & Parker, 2000, p.4). In this study, promotion of critical thinking was incorporated in the instruction through *debates*, *media analysis*, and *problem solving* (see Halvorsen, 2005).

The origins of critical thinking in the relevant literature as in Paul, Elder and Bartell (1997) is attributed mainly to the Greek philosophers, most notably Socrates who laid a lot of emphasis on questioning ideas. Goatly (2000) argues that unlike the present connotation of the term critical as faultfinding, the Greek *Kriticos*, Latin *criticus* means, "being able to discern or distinguish." Even though critical thinking is nothing new, the terminology surfaced in the mid-late 20th century.

Although different tinges of interpretations and translations have sprung up vis-à-vis the concept of critical thinking as Mayfield (2001, p.4, as cited in Long, 2004) humorously notes, "There are as many definitions of critical thinking as there are writers on the subject", most of these scholars frame their understanding of critical thinking as a cognitive process.

Lee (1996) thinks of critical thinking as reasoning, considering reasons to support a claim about the world. It involves considering various claims and determining how some of them are to be true. The notion put forth by Lee discusses the importance of reasoning as a major element of critical thinking whereby the individual questions the veracity of what he comes across. Obviously, there is more to critical thinking than just reasoning. Critical thinking includes conceptualizing, applying, analyzing, synthesizing, and evaluating information gathered through observation, experience, reflection, reasoning, or communication. Facione (2006) believes that the following skills build up the very core of critical thinking: interpretation, inference, explanation, self-regulation, and evaluation of one's own judgments.

Several other scholars have also focused on the thinker's ability to contemplate and judge the degree of truthfulness of any given piece of information. Richards and Schmidt (2002) suggest that critical thinking in language teaching is considered as a level when the learner is able to question what is perceived. The advent of albeit controversial issue critical thinking has reanimated the EFL or ESL classrooms with their practical implications for the teaching or learning process.

Teaching the speaking skill as one of the most important skills in language learning has undergone so many a change and alteration in the history of language pedagogy. The current trends have distanced from the teacher-the authority, teacher-centered classes in which the students were regarded as subjects exposed to a certain methodology of teaching practiced by the teacher to which they had to be attuned. The behaviorist or structuralist school implemented in foreign or second language methodologies has waned and has been superseded by the schools that respect cognition. The learner's role and reflection surfaced as crucial to the bipartisan teaching-learning process. Kabilan (2000) asserts that to be proficient in a language, learners need to be able to think creatively and critically.

Some scholars such as Littlewood (2000) go as far as saying that as far as critical thinking is concerned, learners of a specific background can be contrasted to other groups of speech community. In a study, Littlewood (2000) labels Asian students as passive learners, lacking critical thinking skills. Facione and Giancarlo (1996) maintain that many learners lack the ability to apply thinking in their learning and unless it is demanded of them by some external forces, they may not engage in the problem and apply their skills and knowledge. Therefore, the present study tried to investigate the impact of teaching critical thinking on EFL learners' speaking skill in an Iranian context. To achieve the objectives of the study, the following research question was formed:

Research Question: Is there any significant relationship between teaching critical thinking and EFL learner's speaking skill?

In order to investigate the research question, the following null hypothesis was also formulated:

Null Hypothesis: There is no significant relationship between teaching Critical thinking and EFL learners' speaking skill.

1.2 The Purpose and Significance of Study

The ability to communicate has since time immemorial been an urgent need of man. Among the language skills needed for a proper communication, the speaking skill has stood out as the most important one. The recent trend

of globalization has made the issue even more urgent. Language pedagogical circles have for years been trying to conjure concoctions to ease the process of language teaching and learning. The scholars in the field have for years now realized the importance of the role of the learners in learning a foreign language. The era of teacher-centered classes is long gone and the new approaches to language pedagogy attach paramount importance to the role of learners. Furthermore according to Sliogeriene (2005, p.43), “By allowing students’ subjectivity into the educational field, and by making it an expectation, we provide students with an opportunity to experience themselves as the knower, as people who have the right to claim a voice, an identity, an authority. Learning thus becomes an active, meaningful process and one that is about the learner as well as the content area studied. When we invite students to bring themselves into the educational arena, we make it richer for them and for us.” Therefore, the present study investigated the impact of teaching critical thinking on the speaking skill of Iranian EFL learners. In other words, it attempted to see whether there was a significant relationship between teaching critical thinking and the efficiency of teaching-learning experience of the speaking skill.

1.3 Limitations and Delimitations of the Study

As the limitations of this study, given the fact that the researcher or teacher carried out the study in a language school, the regulations and conditions of the institution had to be complied. The number of the male and female students was not equal in the classes and due to the previously mentioned reason, the present researcher, or teacher did not have a say in it. Therefore, gender could act as an intervening variable in this study. In addition, due to the regulations of the language school and the syllabus that had to be covered, the researcher could allocate no more than 45 minutes of each session for the experimental treatment in each group.

In addition, the researcher narrowed down the participants to those in intermediate level of proficiency, since elementary level learners might have proven to be immature in their foreign language for practicing critical thinking skills, and at advanced level, the learners might have already obtained the skills. In addition, advanced level students would most probably have mastered the speaking skill and basic level students would need a rather more fundamental approach to be able to gain a survival level of speaking proficiency.

Another issue worth being considered as an acute problem with EFL advanced learners is their occasional failure in generating ideas necessary for producing language. The problem stems from the learners’ incompetence in thinking critically and creatively. Fostering learners’ critical thinking at the intermediate level may serve as a resolution to the issue. Hence, the researcher deliberately chose the intermediate level learners to practice the treatment.

2. Methodology

2.1 Participants

To conduct the study, the researcher chose 44 male and female intermediate students at *Respina Talk* (i.e., Iran-Canada) language school with the age range of 20-35. The participants made up the classes, conveniently sampled and the researcher assigned critical thinking as the treatment to them.

2.2 Instrumentation

In order to achieve the objectives of the study, the following instruments were utilized:

2.2.1 Speaking Tests

To elicit the data required for the study, two sets of PET speaking tests were administered with one serving as the pre-test conducted before the treatment and the other as the post-test at the end of the treatment. The oral test lasted about 10-12 minutes for each candidate. The PET speaking test consists of four parts. It demonstrates the learners have spoken English as they take part in conversation, asking or answering questions, and talking freely, for example, about their likes and dislikes. The speaking test is conducted face-to-face to make the test more realistic and more reliable. PET speaking section includes the following parts. As the first step, the students were asked to introduce themselves. The participants were asked some general questions. Next, the participants were required to speak about a given topic and the follow-up questions. After that, the participants were given photos and asked to talk about those photos and the follow-up questions. As the last step of the speaking test, the participants engaged in a dialogue with the test giver to arrange for a social event.

2.2.2 The Oral Proficiency Rating Scale

To observe objectivity of the measuring process of the speaking test, the researcher deemed it necessary to make use of an analytic rating scale. He utilized the PET rating scale for scoring the speaking tests. In addition, two raters with a high inter-rater reliability scored the participants’ speaking to decrease the subjectivity of scoring as much as possible and each participant’s score was the average of the scores given by the two raters. It is

noteworthy that the two raters' inter-rater reliability was estimated from 30 speaking samples that they had previously rated.

2.2.3 Instructional Material

Apart from, yet in line with the treatment randomly assigned to the experimental group, the researcher or teacher had to follow the syllabus of the language school where he conducted the study. *Respina Tak* (i.e., Iran Canada) language school offers "Interchange" books as the textbook for the language learners. Four units are covered throughout every term. The participants of the study were at the level of Interchange 3, the third part, i.e., the last four units of the book. The book of course provided the learners with audio and video materials, utilized in the classroom in accordance with the teacher's guide and in line with the treatment designated for the experimental group.

2.3 Procedure

The study aimed to investigate the impact(s) of teaching critical thinking on EFL learners' speaking skills. The participants of the study were young adult and adult male and female intermediate learners of EFL at *Respina Talk* (i.e., Iran-Canada) language school at Tehran.

The researcher or teacher had one experimental group. The group was assigned to the treatment of critical thinking. At the first step, a PET speaking test was administered to the participants in the experimental group.

Note should be taken that in order to boost the reliability and minimizing the subjectivity of the results, the speaking performance of the participants both at the pre-test and the post-test were scored by two raters, that is, the researcher or teacher and his fellow colleague, trained by the researcher or teacher, to follow the relevant rating scale. To determine the inter-rater reliability and consistency, prior to administering the PET speaking pre-test, a similar PET speaking test was piloted on 30 participants sharing the same qualities as the participants of the study and the inter-rater reliability of the two raters was estimated based on their scorings.

Once the inter-rater reliability and consistency were determined, the average of the two scores given by the two raters was considered as the score obtained by the participants.

After the speaking pre-test, the experimental group underwent the designated treatment for a total of 10 two-hour sessions. Care was given to the equality of time and amount of the treatment employed so that the amount and time of the exposure to the designated treatment would not tarnish the results of the study. It is noteworthy that due to the regulations of the language school and the syllabus that had to be covered, the present researcher allocated 45 minutes of each session for the experimental treatment in each group.

2.4 Treatment

In the experimental group, the present researcher or teacher practiced fostering critical thinking among the participants. To do so, he made use of Halverson's (2005) three techniques of debate, media analysis, and problem solving. In addition, he allocated ten sessions of the course to the treatment with every session including all three techniques, that is to say, in every session the students had to debate, analyze some media, and solve specific problems. The speaking occurred in pairs, small groups, and the whole class.

To carry out the treatment, after the ice-breaking activity in the first session, the researcher or teacher introduced the concept of critical thinking to the students and informed the students of what was expected of them throughout the course. The researcher or teacher made a list of challenging and interesting ideas that could arouse debates.

As for debates, the researcher or teacher presented the students with an example of strong opinions asserted on a given topic. The students then discussed how the debates were to be held. Next, the researcher or teacher formed groups of four with each group comprising of two sub-groups of two with one being for the idea and the other against. The researcher or teacher tried to group like-minded students in the sub groups so that the opinions put forward would be as real as possible. The sub-groups were then given the topic of the debate and then some equal time to contemplate the idea and build their arguments. Then, the sub-groups in every debate group had to confront each other and present their arguments. The students were asked to take notes to be able to recap the strengths and weaknesses of their arguments. As the debate was concluded, one member of every group presented the class with the points made in the debate and the teacher helped with an assessment of the debate. Throughout the debates, the researcher or teacher meticulously monitored every group and gave advice as required.

Debates occurred in every session of the class as a major element of the treatment. In every session, prior to the debate, the researcher or teacher presented the students with a topic of debate, and the previously mentioned

procedures followed. Each session, one of the following topics was discussed.

- Session one: legalization of abortion
- Session two: sex appeal in advertisements
- Session three: capital punishment
- Session four: pre-marital dating
- Session five: Euthanasia
- Session six: celebrities making astronomical sums of money
- Sessions seven: homeschooling
- Session eight: mandatory military service
- Session nine: higher education, free or not
- Session ten: fashion, negative or positive impact

As for media analysis, the students were asked to choose a news article they found interesting and bring a copy to the class. As Halvorsen (2005) suggests, the censorship or biasness of the media presents the EFL or ESL learners with ample issues to discuss. The students then were asked to present the news item in groups of three and thoroughly discuss it. In the first session, the teacher presented the class with an example of the sort of questions they could raise. The questions concerned the following issues:

- The reasons why the piece was reported
- The accuracy of the report
- Whether the report was biased
- The students feelings toward the piece
- The students were then asked by the teacher to write a comment on the piece.

As for problem solving, to solve a problem, the student needed to think about the problem in a critical way and this was exactly what the researcher or teacher intended. The students were asked by the teacher to think of the real problems they had in their lives. They were then asked to share their problems in groups of three. Their peers then suggested solutions to the problems. The groups discussed the practicality of the solutions and then they had to pick the best solution(s). In some cases, when the students failed to think of a problem the teacher presented them with some problems and then they had to pick one and discuss it in the above-mentioned manner.

2.5 Design

The present study was quasi-experimental with a pretest-posttest design, because there was no chance of randomization of the participants and the groups were selected via convenient sampling. The independent variable of the study was critical thinking. The dependent variable was the speaking ability of the participants. The gender of the participants can be considered as the intervening variable, since the number of the male and female participants were not equal in the experimental group. The control variable of the study was the language proficiency of the learners according to the categorizations of the language school they were studying in.

2.6 Data Analysis

The SPSS software was used to conduct the statistical analysis implemented in the present study that was as follows:

1. Inter rater reliability estimate of the two raters in the speaking tests
2. Descriptive statistics of the speaking pretest
3. Descriptive statistics of the posttest
4. Checking the assumption of Analysis of Covariance (ANCOVA)
5. An Analysis of Covariance (ANCOVA)

3. Results and Discussion

In this section, statistical analyses are presented in detail in order to answer the posed research question and examine the formulated null hypothesis of the study.

3.1 Descriptive Statistics of the Speaking Pretest

The first step in statistical analysis was to analyze the data of the speaking pretest of the experimental group. Table 1 presents the descriptive statistics of the speaking pretest conducted prior to the treatment.

Table 1. Descriptive Statistics of the Experimental Group' Speaking Pretest

| | <i>N</i> | <i>Range</i> | <i>Minimum</i> | <i>Maximum</i> | <i>Mean</i> | <i>Std. Deviation</i> | <i>Variance</i> | <i>Skewness</i> | <i>Std. Error</i> |
|-----------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|------------------|------------------|-------------------|
| | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> |
| Pre CRITICAL THINKING | 13 | 10.50 | 13.00 | 23.50 | 17.9615 | 2.67287 | 7.144 | -.035 | .616 |
| Valid N (list wise) | 13 | | | | | | | | |

As Table 1 shows, the mean turned out to be 17.96 for critical thinking group. In addition, the variance was 7.14. Moreover, the fraction of skewness statistic to its Std. Error was equal to .05 that is between the range of -1.96 and 1.96, ensuring the normality of the distribution of scores in the speaking pretest for the experimental group.

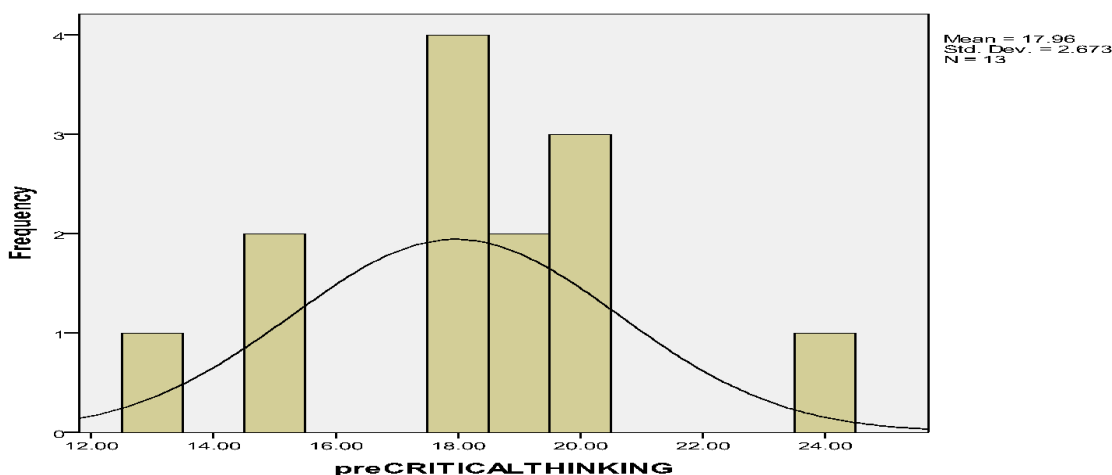


Figure 1. Histogram of Speaking Pretest Scores for Critical Thinking Group

In order to make sure of the reliability of the test scores, the scores of two raters were correlated to see whether the test was reliable or not. Table 2 provides the information on the inter-rater reliability of the two raters who scored the speaking pretest.

Table 2. Inter-rater Reliability of Speaking Pretest

| | | <i>rater1</i> | <i>rater2</i> |
|--------|---------------------|---------------|---------------|
| rater1 | Pearson Correlation | 1 | .923** |
| | Sig. (2-tailed) | | .000 |
| | N | 50 | 50 |
| rater2 | Pearson Correlation | .923** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 50 | 50 |

** . Correlation is significant at the 0.01 level (2-tailed).

As can be seen from Table 2, the two raters demonstrated a high amount of correlation and a reliable measurement. Table 3 presents the descriptive statistics of the speaking posttest, conducted at the end of the treatment period.

3.2 Descriptive Statistics of the Speaking Posttest

At the end of the treatment period that took ten sessions, the present researcher conducted a speaking posttest to see whether there has been any significant change in the performance of the experimental group. The data are provided in Table 3.

Table 3. Descriptive Statistics of Experimental Group’s Speaking Posttest

| | <i>N</i> | <i>Range</i> | <i>Minimum</i> | <i>Maximum</i> | <i>Mean</i> | <i>Std. Deviation</i> | <i>Variance</i> | <i>Skewness</i> | <i>Std. Error</i> |
|------------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|------------------|------------------|-------------------|
| | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> | <i>Statistic</i> |
| Post Critical Thinking | 13 | 9.00 | 15.00 | 24.00 | 19.6538 | 2.46969 | 6.099 | -.448 | .616 |
| Valid N (List Wise) | 13 | | | | | | | | |

According to Table 3, a mean of 19.65 was obtained in critical thinking group. The variance was 6.09. In addition, the distribution of scores for the experimental group demonstrated normality; since none of the values of the fraction of skewness or Std. Error of skewness came out to be out of the range of -1.96 and 1.96 (i.e., 0.91). The normal distribution is manifested in Figures 5.

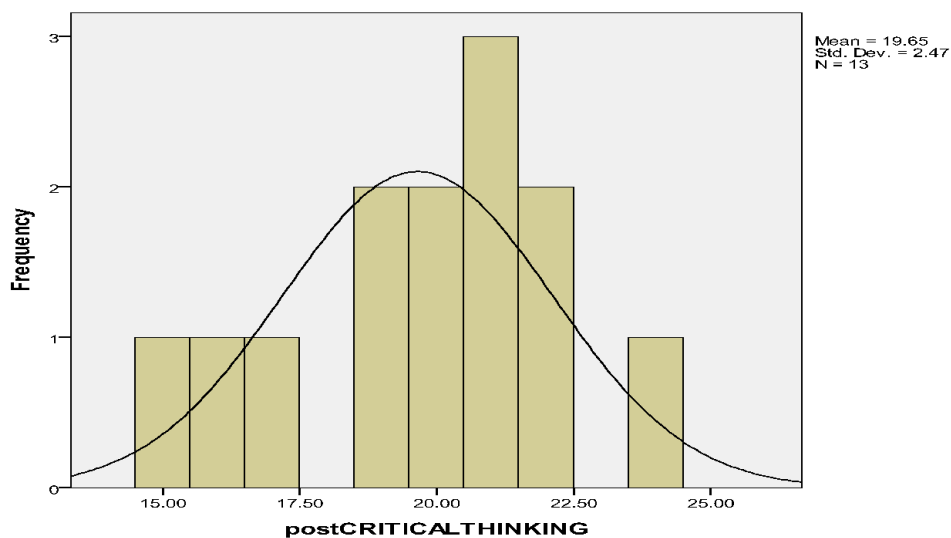


Figure 2. Histogram of Speaking Posttest Scores for Critical Thinking Group

Table 4 shows the inter-rater reliability estimate between the two raters of the speaking posttest.

Table 4. Inter-rater reliability of Speaking Posttest

| | | <i>rater1</i> | <i>rater2</i> |
|--------|---------------------|---------------|---------------|
| rater1 | Pearson Correlation | 1 | .933** |
| | Sig. (2-tailed) | | .000 |
| | N | 44 | 44 |
| rater2 | Pearson Correlation | .933** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 44 | 44 |

** . Correlation is significant at the 0.01 level (2-tailed).

As can be seen from Table 4, the two raters enjoyed a high level of correlation, ensuring the researcher of the reliability of the measurement.

3.3 Testing the Hypothesis of the Study

As the number of participants was not large and there was no chance of homogenizing the participants prior to the treatment without the risk of losing more participants and decreasing the number of the target sample, an analysis of covariance ANCOVA was conducted as the inferential statistics of the research study and in order to investigate the null hypothesis which stated that “there is no significant relationship between teaching critical thinking and EFL learner’s speaking skill”.

However, prior to this analysis, there were a set of assumptions that need to be checked to legitimize the conducting of an ANCOVA. The independent categorical variable was the treatment provided for experimental group, the continuous dependent variable was the participants’ speaking ability, and the continuous covariate was the pretest scores of the participants on the speaking test conducted prior to the treatment.

The first assumption is the reliability of the covariate that is measured before the treatment and in this case the speaking pretest. As the speaking test was a PET speaking section rated according to the rating scale provided for the test and scored by raters whose inter-rater reliability was assured previously (see Table 4), this first assumption was met.

The last assumption that needed to be checked was the homogeneity of regression slopes that concerns the relationship between the covariate and the dependent variable for the group. What is checked in this assumption is that there is no interaction between the covariate (speaking pretest) and the treatment or experimental manipulation. Table 5 presents the results.

Table 5. Tests of Between-Subjects Effects-Homogeneity of Regression Slopes

| Dependent Variable: speaking POSTTEST | | | | | |
|---------------------------------------|--------------------------------|-----------|--------------------|----------|-------------|
| <i>Source</i> | <i>Type III Sum of Squares</i> | <i>Df</i> | <i>Mean Square</i> | <i>F</i> | <i>Sig.</i> |
| Corrected Model | 238.931a | 5 | 47.786 | 64.905 | .000 |
| Intercept | 18.763 | 1 | 18.763 | 25.484 | .000 |
| GROUP | 1.229 | 2 | .614 | .834 | .442 |
| speaking PRETEST | 202.439 | 1 | 202.439 | 274.958 | .000 |
| GROUP * speaking PRETEST | .970 | 2 | .485 | .659 | .523 |
| Error | 27.978 | 38 | .736 | | |
| Total | 18840.000 | 44 | | | |
| Corrected Total | 266.909 | 43 | | | |

a. R Squared = .895 (Adjusted R Squared = .881)

As the output obtained from Table 5 indicates, the value of significance level of the interaction term (shown above as GROUP*speaking pretest) is .523, larger than .05, indicating that the assumption has not been violated. Bearing in mind that the normality of the distributions of scores in both speaking pretest and posttest was previously checked and ensured, and with all assumptions of legitimizing ANCOVA met, the researcher felt confident to embark on the analysis. Tables 6, and 7, present the results.

Table 6. Descriptive Statistics of Speaking Posttest

| Dependent Variable: speaking POSTTEST | | | |
|---------------------------------------|-------------|-----------------------|----------|
| <i>GROUP</i> | <i>Mean</i> | <i>Std. Deviation</i> | <i>N</i> |
| CRITICAL THINKING | 19.6538 | 2.46969 | 13 |
| Total | 20.5455 | 2.49142 | 44 |

As can be seen from Table 6, the means was 19.65 for the critical thinking group. In addition, the standard deviation came out as 2.46. Table 7 presents the Levene’s test of equality of error variances.

Table 7. Levene's Test of Equality of Error Variances

| Dependent Variable: speaking POSTTEST | | | |
|---------------------------------------|------------|------------|-------------|
| <i>F</i> | <i>df1</i> | <i>df2</i> | <i>Sig.</i> |
| 4.430 | 2 | 41 | .618 |

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + speaking PRETEST + GROUP

According to the Table 7, the Sig. value (.618) was larger than .05 showing that the assumption of homogeneity of variance was not violated. Table 8 presents the main ANCOVA result. It shows whether the group was significantly different in terms of their score on the speaking posttest (dependent variable).

Table 8. Tests of Between Subjects Effects

| Dependent Variable: speaking POSTTEST | | | | | | |
|---------------------------------------|--------------------------------|-----------|--------------------|----------|-------------|----------------------------|
| <i>Source</i> | <i>Type III Sum of Squares</i> | <i>df</i> | <i>Mean Square</i> | <i>F</i> | <i>Sig.</i> | <i>Partial Eta Squared</i> |
| Corrected Model | 237.962a | 3 | 79.321 | 109.607 | .000 | .892 |
| Intercept | 17.938 | 1 | 17.938 | 24.787 | .000 | .383 |
| speaking PRETEST | 223.195 | 1 | 223.195 | 308.415 | .000 | .885 |
| GROUP | 19.786 | 2 | 9.893 | 13.670 | .000 | .406 |
| Error | 28.947 | 40 | .724 | | | |
| Total | 18840.000 | 44 | | | | |
| Corrected Total | 266.909 | 43 | | | | |

a. R Squared = .892 (Adjusted R Squared = .883)

The Sig. value corresponding to the independent variable (GROUP) .000 turned out to be less than .05; therefore, the results are significant and the experimental group is indeed different regarding its performance on the speaking posttest. The partial Eta square was equal to .40 showing that 40% of the variance of the dependent variable is explained by the independent variable. Table 9 presents the estimated marginal means on the dependent variable for each of the groups. Adjusted refers to the fact that the effect of covariate has been statistically removed.

Table 9. Estimated Marginal Means

| Dependent Variable: speaking POSTTEST | | | | |
|---------------------------------------|-------------|-------------------|--------------------------------|--------------------|
| <i>GROUP</i> | <i>Mean</i> | <i>Std. Error</i> | <i>95% Confidence Interval</i> | |
| | | | <i>Lower Bound</i> | <i>Upper Bound</i> |
| CRITICAL THINKING | 19.536a | .236 | 19.059 | 20.013 |

a. Covariates appearing in the model are evaluated at the following values: speaking PRETEST = 17.8295.

4. Discussion

A one-way ANCOVA was conducted to investigate the effectiveness of the intervention designed to improve speaking ability. The independent variable was the intervention (i.e., critical thinking), and the dependent variable consisted of scores on the speaking posttest administered after the intervention was completed. The speaking pretest was considered as the covariate in this analysis. Preliminary checks were conducted to ensure that there was no violation of the assumptions of normality, linearity, homogeneity of variances, homogeneity of regression slopes, and reliable measurement of the covariate. After adjusting for the pre-intervention score, there was a significant relationship between the group on post-intervention scores of speaking [$F(1, 40) = 13.67, p = .000$], partial eta square = .40].

The analysis of the data elicited clearly rejects the null hypothesis of the research stating that 'There is no significant relationship between teaching critical thinking and EFL learner's speaking skill.'

Critical thinking also has been the subject of heated discussion in the contemporary history of language pedagogical circles. However, the proponents of the idea outnumber the opponents by a large margin. As Sliogeriene (2005) says:

By allowing students' subjectivity into the educational field, and by making it an expectation, we provide students with an opportunity to experience themselves as the knower, as people who have the right to claim a voice, an identity, an authority. Learning thus becomes an active, meaningful process and one that is about the learner as well as the content area studied. When we invite students to bring themselves into the educational arena, we make it richer for them and for us.

Material developers have likewise learned about the efficacy of incorporating tasks that promote critical thinking. A glance at Richards' (2013) 'Four Corners' stands proof to the assertion.

The present research however is quite distinctive in that it presents an investigation into the impact of the teaching of critical thinking on EFL learners. Naturally, the results have certain implications for pedagogical circles.

5. Conclusions, Implications and Suggestions

5.1 Conclusion

The present study aimed to investigate the impact of teaching of critical thinking on EFL learners' speaking skill in an Iranian context. The results previously presented clearly rejected the null hypothesis. Accordingly, there is a significant relationship between critical thinking and EFL learners' speaking skill.

At the end of the treatment period that took ten sessions, the researcher conducted a speaking posttest to see whether there has been any significant change in the performance of the experimental group. The mean was 19.65. The variance was 6.09. The null hypothesis was clearly rejected.

The study aimed to investigate the impact of teaching critical thinking upon the EFL intermediate learners. The results of the study serve the enthusiast teachers and material developers as a device to better their work. As suggested by the study, the teachers and material developers who devise and employ tasks and strategies for promoting learners' critical thinking manage to achieve marvelous results in EFL classrooms. The analysis of the data collected throughout the study stand as evidence to the assertion.

Note should be taken however, that due to the language school's regulation where the study was carried out, the researcher or teacher could allocate no more than 45 minutes of each session to the treatment. Had the limitation not been there, the results of the study might have turned out differently.

As the analysis of the results of the study suggests, fostering the learners' critical thinking arms the learners with the skills necessary for learning a foreign language. The findings of the study highlight the efficacy and efficiency of fostering learners' critical thinking. The participants of the study found the experience as fascinating and manifested appreciable interest in the concept of critical thinking. What seemed essential to the researcher or teacher was the proper introduction, incorporation, and application of critical thinking. In order to prove efficient the researcher or teacher needed to have the participants willingly involve in the experience.

5.2 Implications

The analysis of the data elicited through the previously mentioned mechanisms, proved the significant relationship the implementation of the treatment made in each participant.

The outcome reveals the importance of fostering the language learners' critical thinking. The findings of the study while consistent with the assertions of the scholars advocating critical thinking highlights the efficacy of the fostering of the learner's critical thinking. To that end, the researcher makes the following recommendations:

- Teachers must be informed of the construct of critical thinking. Teacher training courses need to familiarize language teachers with the strategies and techniques applicable in fostering learners' critical thinking simultaneously.
- Material developers need to promote learner's critical thinking through provision of tasks that help teachers and learners to that end.
- The learners also need to be made aware of the concept of critical thinking. They need to learn how to think critically. They also need to learn about self-regulation and discovery learning. The learners need to gradually take charge of their own learning, while being encouraged to think for themselves.

- Establishing positive teacher-student, student-student rapport, creating a convivial environment and promoting cooperative or collaborative learning should be highlighted in language classrooms. They act as catalysts in promoting learner's critical thinking.

5.3 Suggestions for Further Research

Further study will certainly shed new lights on the implementation of critical thinking in pedagogical circles helping facilitate the teaching or learning of a foreign or second language. The followings may serve the enthusiastic researchers as potential grounds to cover:

- Even though an assumption on the part of the present researcher was that the elementary learners of a foreign language might lack the maturity necessary for being exposed to the treatments of the study or that the advanced learners might have already obtained or developed the critical thinking skills, it might prove useful to include those levels in further research.
- The limitation concerning the number of participants of the study is an issue worth considering. Further studies with large numbers of participants may be carried out to assess the findings of the study.
- The study was carried out in a private language school where the participants willingly took part in EFL classrooms. The level of motivation of the learners in such an environment would in all likelihood differ from that of the EFL learners in other educational institutions including schools. Further research may be carried out in other educational facilities.
- Due to the age limitation dictated by the language school where the study was conducted, children were excluded from the study. Further study may adopt appropriate strategies for fostering critical thinking among children while learning a foreign language to see whether treatments would yield the same results or not.
- Further study may be carried out to investigate the impact of teaching critical thinking on other dependent variables specifically other language skills, i.e. reading, writing and listening.
- Due to the regulations of the language school and the syllabus that had to be covered, the researcher allocated 45 minutes of each session for the experimental treatment in the group. Further study may be carried out to investigate the result of longer exposure to the treatments.

References

- Facione, P. A. (2006). *Critical Thinking: What is it and why it counts*. Retrieved April 10, 2011 from <http://www.insightassessment.com/pdffiles/what&why/2006.pdf>.
- Facione, P.A. (1990). *Critical thinking: A statement of expert consensus for purpose of educational assessment and instruction*. Retrieved on July 8, August 2011 from: <http://www.insightassessment.com/pdffiles/criticalthinking.pdf>.
- Goatly, A. (2000). *Critical reading and writing: an introduction course book*. London: Rutledge.
- Halverson, A. (2005). *Incorporating critical thinking skills development into ESL/EFL courses*. Retrieved July 10, 2011 from <http://iteslj.org/Techniques/Halvorsen-criticalThinking.html>.
- Kabilan, M. K. (2000). Creative and critical thinking in language classrooms. *The Internet TESL Journal*, 6(6). Retrieved April 19, 2011 from <http://iteslj.org/Techniques/Kabilan-Criticalthinking.html>.
- Lazaraton, A. (1996). Interlocutor Support in Oral proficiency interviews. *Language Testing*, 13, 151-172. <https://doi.org/10.1177/026553229601300202>
- Lee, P. L. (1996). *What is the argument?* Boston: McGraw-Hill Higher Education.
- Littlewood, W. (2000). Do Asian students really want to listen and obey? *ELT Journal*, 54(1), 31-36. <https://doi.org/10.1093/elt/54.1.31>
- Mayfield, M. (2001). *Thinking for Yourself: Developing Critical Thinking Skills through Reading and Writing* (5th ed.) United States: Thomas Learning.
- Moore, B. M. & Parker, R. (2000). *Critical Thinking*. Boston: McGraw-Hill Higher Education.
- Nunan, D. (1999). *Second language teaching and learning*. Boston: Heinle & Heinle Publishers.
- Paul, R. W. Elder, L. & Bartell, T. (1997). *A Brief History of the Idea of Critical Thinking*. Retrieved May 2011 from <http://www.criticalthinking.org/pages/california-teacher-preparation-for-instruction-in-critical-thinking/531>

- Richards, J. C. & Schmidt, R. (2002). *Longman dictionary of language teaching & applied linguistics* (3rd Ed.). Malaysia: Pearson Education Book.
- Richards, J. C. & Bohlke, D. (2012). *Four Corners*. United States: Cambridge University Press.
- Richards, J. C., Gallo, P. B. & Renandya W. A. (2001). Exploring teachers' beliefs and the processes of change. *PAC Journal*, 1(1), 41-62
- Sliogeriene, J. (2005). Promoting effective thinking in ESP teaching. *ACTA PAEDAGOGICA VILNENSIA*. ISSN 1392-5016.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>).